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VIEW ON THE DEVELOPMENT OF A NEW VEHICLE EMISSION STANDARD IN EUROPE: EURO 7 / VII



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Whereas the latest EU developments in vehicle emissions have been an outstanding step forward towards a clean fleet, there is still a huge potential to improve the impact that vehicles have on air quality.

The challenges that we face today are not only technical, but behavioural too. The tampering of the emissions control system is jeopardising efforts to have clean combustion engines and cybersecurity will be without doubt an issue in the coming years.

TODAY'S REGULATORY FRAMEWORK MAKES IT DIFFICULT TO ASSESS THE PERFORMANCE OF THE FLEET

The solution to the new challenges requires close cooperation between all the stakeholders and makes it essential to define an impartial and transparent framework to guarantee that vehicles arriving in the fleet are clean and their features will reasonably last as long as they are used.

Type approval and Euro 7/VII shall define a scenario that makes tampering difficult and ensure cybersecurity. It is crucial to avoid situations like the ones today, where the after-treatment system of a heavy-duty truck, with a cost similar to the engine itself, can be cheated with a device worth less than 15 Euro¹.

Furthermore, current after-treatment systems are so efficient that they allow engines to be designed without some of the past limitations. Therefore, malfunction or the tampering of those after-treatment systems creates vehicles that are much dirtier than those fulfilling older standards.

TYPE APPROVAL MUST:

- ✓ MAKE TAMPERING MORE DIFFICULT;
 - ✓ INCLUDE PROVISIONS FOR CYBERSECURITY,
 - ✓ FACILITATE THE WAY THAT VEHICLES ARE CHECKED DURING THEIR LIFE.
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¹ www.alibaba.com on Nov 16th, 2018. Search words "adblue emulator".



Keeping that in mind, the approval framework must ensure that vehicles can be controlled during their lifetime. Today's technology will not resist the tampering attempts and cybersecurity attacks of the near future.

CHEAP, FEASIBLE AND IMPARTIAL IN-LIFE CHECKS ARE ESSENTIAL TO KEEP THE EU'S FLEET CLEAN

There is a basic concept to consider: the right access for the relevant stakeholders to vehicle systems and data, and that is to be regulated by authorities. Cybersecurity or tampering should not be an excuse for vehicles manufacturers to make them inaccessible.

New technologies will offer very promising opportunities to facilitate whole-life compliance. OBM, for instance, has huge potential. Like any other technology, OBM needs to be periodically checked because it must last as long as the vehicle is used and could easily become a target for tampering ².

SOCIETY CAN'T AFFORD A LACK OF ACCESS TO VEHICLES' SYSTEMS AND DATA

In summary, it is necessary to have in mind some essential aspects since the conception of vehicles:

- ✓ Facilitating reference values for in-life checks;
- ✓ Facilitating the checks for the presence efficiency and function of emissions-limiting systems;
- ✓ Providing enough access³ to systems, data, sensors and actuators; and
- ✓ Setting the necessary provisions to ensure the right software is installed in the vehicle.

² <https://www.banggood.com/Car-CEL-Fix-Check-Engine-Lights-Eliminator-Adapters-Oxygen-O2-Sensor-M18X1-5-p-1628655.html?akmClientCo%E2%80%A6> on Feb 11, 2020. Example of tampering O₂ sensors

³ Access to systems, data and actuators, when necessary, shall be mechanical, visual and/or electronic.



AND ALL THE ABOVE MUST BE MANAGED IN AN IMPARTIAL WAY.

CITA, as the association of the vehicle compliance sector, makes available the experience of more than 120 M inspections per year in the European Union to define a more robust whole-life framework for vehicles.



CITA, the International Motor Vehicle Inspection Committee, is the worldwide not-for-profit association of governmental agencies and authorised private companies active on vehicle compliance.

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